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PATENT APPLICATION

ATTORNEY DOCKET NO. 200207237-1

IN THE
UNITED STATES PATENT AND TRADEMARK OFFICE

Inventor(s): Christoph Gouguenheim et al.

Confirmation No.: 2133

Application No.: 10/733,434

Examiner: Laurel L. Lashley

Filing Date: December 10, 2003

Group Art Unit: 2132

Title: TRUSTED SYSTEM FOR FILE DISTRIBUTION

Mail Stop Appeal Brief-Patents
Commissioner For Patents
PO Box 1450
Alexandria, VA 22313-1450

TRANSMITTAL OF APPEAL BRIEF

Transmitted herewith is the Appeal Brief in this application with respect to the Notice of Appeal filed on November 18, 2008.

☐ The fee for filing this Appeal Brief is $540.00 (37 CFR 41.20).

☒ No Additional Fee Required.

(complete (a) or (b) as applicable)

The proceedings herein are for a patent application and the provisions of 37 CFR 1.136(a) apply.

☐ (a) Applicant petitions for an extension of time under 37 CFR 1.136 (fees: 37 CFR 1.17(a)-(d)) for the total number of months checked below:

☐ 1st Month $130	☐ 2nd Month $490	☐ 3rd Month $1110	☐ 4th Month $1730

☐ The extension fee has already been filed in this application.

☒ (b) Applicant believes that no extension of time is required. However, this conditional petition is being made to provide for the possibility that applicant has inadvertently overlooked the need for a petition and fee for extension of time.

Please charge to Deposit Account 08-2025 the sum of 5 00. At any time during the pendency of this application, please charge any fees required or credit any over payment to Deposit Account 08-2025 pursuant to 37 CFR 1.25. Additionally please charge any fees to Deposit Account 08-2025 under 37 CFR 1.16 through 1.21 inclusive, and any other sections in Title 37 of the Code of Federal Regulations that may regulate fees.

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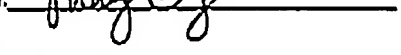
Signature: 

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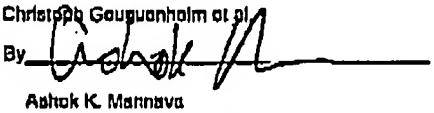
By 
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APPEAL BRIEF - PATENTS

Sir:

This is an Appeal Brief in connection with the decisions of the Examiner in a Non-Final Office Action dated August 21, 2008. It is respectfully submitted that the present application has been more than twice rejected. Each of the topics required in an Appeal Brief and a Table of Contents are presented herewith and labeled appropriately.

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(1) Real Party in Interest

The real party in interest is Hewlett-Packard Development Company, L.P.

(2) Related Appeals and Interferences

The Appellant is unaware of any appeals or interferences related to this case.

(3) Status of Claims

Claims 1-28 and 30-36 are pending in the present application of which claims 1, 11, 17, 19, 26, 28 and 36 are independent.

Claim 29 is canceled.

Claims 1-28 and 30-36 are rejected.

Claims 1-28 and 30-36 are appealed.

(4) Status of Amendments

No amendment was filed subsequent to the Office Action dated August 21, 2008.

(5) Summary of Claimed Subject Matter

It should be understood that the subject matter of the independent claims and dependent claims recited below is supported in at least the following cited sections of the present

application. Thus, other sections in the present application may provide the same or additional supports as well.

Independent Claims

Claim 1. A secure token for use with an encrypted file and an insecure decryption device, the secure token comprising a processor for protecting a first cryptographic key against unauthorized access, and (paragraphs 22 and 25, fig 2) creating a second cryptographic key from the first key and a message unique to the insecure device, the second key usable for file decryption by the insecure device. (paragraph 32, fig 3)

Claim 11. An article for a secure device, the secure device including a processor, the secure device used in combination with an insecure device, (paragraphs 22 and 25, fig 2) the article comprising memory encoded with data for instructing the processor to protect a first cryptographic key against unauthorized access (paragraph 31), use a hash function to create a second cryptographic key from the first key and a message unique to the insecure device, and send the second key to the insecure device. (paragraph 35, fig 4)

Claim 17. A data rights management server for use with a media transaction system, (fig 1) the server comprising a processing unit programmed to cause the server to establish a secure channel with a smart card, access a unique identifier corresponding to an insecure device, (paragraph 29, fig 3) send a first cryptographic key to the smart card via the secure channel, (paragraph 29, fig

3) receive a unique identifier from the insecure device, create a second key from the first key and the identifier (paragraphs 32-33, fig 3); encrypt a media file with the second key, and send the encrypted media file to the insecure device, the first key corresponding to the media file. (paragraphs 32-34, fig 3)

Claim 19. A method of using an insecure decryption device for file distribution, the method comprising:

accessing a message unique to the insecure device; (paragraphs 60-61, fig 7)

accessing a first cryptographic key; (paragraphs 60-61, fig 7)

creating a second cryptographic key from the message and the first key; and (paragraphs 63-64, fig 7)

allowing the insecure device to access the second key but not the first key; whereby the insecure device can use the second key for decryption. (paragraph 65, fig 7)

Claim 26. An insecure decryption device for use with a secure device and a first cryptographic key, the device comprising: (fig 1)

means for sending a message to the secure device, the message unique to the insecure device; (paragraphs 60-61, fig 7 and paragraph 27, figs 3-4)

means for receiving a second cryptographic key from the secure device, the second cryptographic key derived from the message and the first cryptographic key; and (paragraphs 65-66, fig 7 and paragraph 32-34, figs 3-4)

means for performing decryption with the second cryptographic key. (paragraph 66, fig 7 and paragraph 35, figs 3-4)

Claim 28. A trusted system for file distribution, the system comprising:

an insecure device; (figs 1 and 6) and

a trusted secure device for storing a first cryptographic key, accessing a message from the insecure device wherein the message is unique to the insecure device, creating a second cryptographic key from the message and the first key, and allowing the insecure device to access the second key, the first key granting file access rights; (figs 3 and 7, paragraphs 27-34 and 59-69)

the insecure device not allowed to access the first key, the insecure device using the second key for decryption. (figs 3 and 7, paragraphs 27-34 and 59-69)

Claim 36. A trusted media transaction system comprising

an insecure media player; and (figs 1 and 6)

a trusted secure token for performing an electronic transaction to obtain a first cryptographic key, accessing a message from the insecure device wherein the message is unique to the insecure device, creating a second cryptographic key from the message and the first key, and allowing the insecure device to access the second key, the first key granting media file access rights; (figs 3 and 7, paragraphs 27-34 and 59-69)

the insecure device configured to use the second key for media file decryption. (figs 3 and 7, paragraphs 27-34 and 59-69)

Dependent Claims

Claim 7. The secure token of claim 4, wherein the secure token conducts a transaction with a peer to sell a file; and wherein the secure token sends the first key to the peer. (paragraphs 21, 22, 27-32, 36-43)

Claim 8. The secure token of claim 7, wherein the secure token creates a third key that is unique to the peer, and sends the third key to the insecure device and the peer. (paragraphs 21, 22, 27-32, 36-43)

Claim 15. The article of claim 13, wherein the secure device conducts a transaction with a peer to sell a file; and wherein the secure device sends the first key to the peer. (paragraphs 21, 22, 27-32, 36-43)

Claim 16. The article of claim 15, wherein the data further instructs the processor to create a third key that is unique to the peer, sends the third key to the insecure device and the peer. (paragraphs 21, 22, 27-32, 36-43)

Claim 24. The method of claim 21, wherein the electronic transaction is conducted with a peer to sell a file; the method further comprising sending the first key to the peer. (paragraphs 21, 22, 27-32, 36-43)

Claim 25. The method of claim 24, further comprising creating a third key that is unique to the peer, and sending the third key to the insecure device and the peer. (paragraphs 21, 22, 27-32, 36-43)

(6) Grounds of Rejection to be Reviewed on Appeal

Claims 1-28 and 30-36 are rejected under 35 U.S.C. §103(a) as being unpatentable over U.S. Patent No. 6,289,455 to Kocher et al. ("Kocher") in view of U.S. Patent No. 7,194,092 to England et al. ("England").

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(7) Arguments

The rejection of claims 1-28 and 30-36 under 35 U.S.C. §103(a) as being unpatentable over Kocher in view of England should be reversed because the proposed combination fails to teach or suggest all the claimed features.

The test for determining if a reference anticipates a claim, for purposes of a rejection under 35 U.S.C. § 102, is whether the reference discloses all the elements of the claimed combination, or the mechanical equivalents thereof functioning in substantially the same way to produce substantially the same results. As noted by the Court of Appeals for the Federal Circuit in *Lindemann Maschinenfabrick GmbH v. American Hoist and Derrick Co.*, 221 USPQ 481, 485 (Fed. Cir. 1984), in evaluating the sufficiency of an anticipation rejection under 35 U.S.C. § 102, the Court stated:

> Anticipation requires the presence in a single prior art reference disclosure of each and every element of the claimed invention, arranged as in the claim.

Therefore, if the cited reference does not disclose each and every element of the claimed invention, then the cited reference fails to anticipate the claimed invention and, thus, the claimed invention is distinguishable over the cited reference.

Claims 1-28 and 30-36 were rejected under 35 U.S.C. §103(a) as being unpatentable over Kocher in view of England.

According to an embodiment described in the Applicants' specification, a device, such as a media player, that is operable to read a secure token, sends its unique ID, N_j, to a server, for example, to purchase a media file. After the purchase, the server sends a first cryptographic key

K_1 to the secure token. The server also uses a secure hash function to generate a second cryptographic key K_2 from the first cryptographic key and the unique ID of the media player as follows: $K_2=H(K_1,N_j)$. The server encrypts the media file with K_2 and sends it to the media player. The secure token gets N_j from the media player and calculates K_2, and sends K_2 to the media player. The media player may then decrypt the media file with K_2 received from the secure token and play the media file. See paragraphs 27-34 and figure 3. The unique ID of the device is a unique message of the device, such as a serial number. Another type of message unique to the media player and stored in the media player may be used to generate K_2. See paragraph 62. As described above, it should be noted that in these embodiments, a message unique to the media player, such as serial number, is used to generate K_2.

Claim 1 recites, *inter alia*:

> creating a second cryptographic key from the first key and a message unique to the insecure device, the second key usable for file decryption by the insecure device.

As conceded in the Office Action at page 3, Kocher fails to teach or suggest creating a second key from a first key and a message unique to an insecure device.

England fails to teach or suggest ways to overcome the above-discussed deficiencies of Kocher. More specifically, in reference to Fig. 2, England discloses a subscriber computer 200, where a digital rights management operating system (DRMOS) 205 provides a key-based secure storage in order to protect content permanently stored on the subscriber computer 200. The stored content of the subscriber computer 200 is provided by a content provider 220, and "the

DRMOS 205 must securely store private keys or session keys for use with encrypted content." England at column 9, lines 30-33, and column 16, lines 50-54. Keys used in the DRMOS 205 are generated by using key generation functions shown in Fig. 8.

The Office Action at page 3 alleges that it would have been obvious to a person of ordinary skill in the art to modify a method of a regulating access to digital content in Kocher by incorporating "application and user storage keys used to access content information associated with a user's player" as allegedly taught by England. The Office Action at page 3 cites col. 4, lines 1-24, of England as allegedly showing features related to use of a first key and a message unique to an insecure device. In the cited passage, England discloses that:

> A one-way hash function is applied to a seed supplied by an application to produce a first hashed seed that is used to generate the application storage key. A one-way hash function is applied to a seed supplied by a user to produce a first hashed seed that is passed to a keyed hash function, keyed on an identity for the user, to produce a second hashed seed. The second hashed seed is used to generate the user storage key.

However, the cited passage fail to teach that the application storage key or the user storage key is generated from a message unique to the subscriber computer 200 for at least the following two reasons.

First, while, in Fig. 8 of England, an application storage key 811 is generated by the GENRATE KEY FUNCTION by using an operating system's identity (See England at column 17, lines 16-25), England fails to teach or suggest that the operating system's identity is unique

to the subscriber computer 200. Instead, England discloses that different versions of a basic operating system will generate different identities, and that a basic DRMOS and additional components always have same identities when executing a specific type of processor. England at column 13, lines 29-36. Since a basic DRMOS and its additional components always have same identities for a number of processors having a same processor type, the application storage key 811 generated by using an operating system's identity is the same for a number of processors if the processor type is the same. Thus, the operating system's identity of England is not a message unique to the computer 200.

Second, in generating the user storage key of England by using user's identity, England fails to teach or suggest that the user's identity is a message unique to the subscriber computer 200. For example, while different keys are used in the subscriber computer 200 to prevent unauthorized use by users, operating systems, or software at the computer 200 or other computers (See England at column 21, lines 2-10), there is no disclosure or a need in England that the user's identity used in generating the user storage key is a message unique to the subscriber computer 200.

The rest of England's disclosure fails to overcome the above-discussed deficiencies of England. Thus, England fails to teach or suggest creating a second key from a first key and a message unique to an insecure device, as recited in claim 1.

For at least the above reasons, it is respectfully requested that the rejection of claim 1 and its dependent claims under 35 U.S.C. §103(a) as being unpatentable over Kocher in view of England be reversed.

Independent claims 11, 17, 19, 26, 28, and 36 each recite features similar to those features of claim 1 discussed above. Thus, it is respectfully submitted that for the reasons set forth earlier with respect to independent claim 1, that the rejection of independent claims 11, 17, 19, 26, 28, and 36 and their respective dependent claims under 35 U.S.C. §103(a) as being unpatentable over Kocher in view of England be reversed.

Further, in addition to being allowable for their dependencies upon allowable independent claims as discussed above, dependent claims 7, 8, 15, 16, 24 and 25 are each allowable over Kocher in view of England for at least the following reasons.

Claims 7 and 15 each recites that a secure token conducts a transaction with a peer to sell a file. Claim 24 recites similar features. Such features of claims 7, 15, and 24 are not taught or suggested in the proposed combination of Kocher and England. The Office Action at page 4 cites column 7, lines 65-67, and column 9, lines 1-6, of Kocher as showing the above-recited features of claims 7, 15 and 24. However, while the cited section of Kocher discloses that a cryptographic key may be shared by a small number of similar devices, Kocher fails to teach or suggest that, in Fig. 2, the cryptographic rights unit 225 for generating cryptographic keys conducts a transaction with a peer to sell a file. England fails to cure the foregoing deficiencies of Kocher. Thus, the above-discussed features of claims 7, 15, and 24 are not taught or suggested in the proposed combination of Kocher and England.

Claims 8 and 16 each recites that a secure token creates a third key unique to the peer and sends the third key to the peer and the insecure device. Claim 25 recites similar features. Such features of claims 8, 16, and 25 are not taught or suggested in the proposed combination of

Kocher and England. The Office Action at page 4 cites column 7, lines 65-67, and column 9, lines 1-6, of Kocher as showing the above-recited features of claims 8, 16, and 25. However, while the cited section of Kocher discloses that a cryptographic key may be shared by a small number of similar devices, Kocher fails to teach or suggest that, in Fig. 2, the cryptographic rights unit 225 creates a third key unique to a peer and sends the third key to the peer and the playback device 210. Thus, the above-discussed features of claims 8, 16, and 25 are not taught or suggested in the proposed combination of Kocher and England.

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(8) Conclusion

For at least the reasons given above, the rejection of claims 1-28 and 30-36 described above described above should be reversed and these claims allowed.

Please grant any required extensions of time and charge any fees due in connection with this Appeal Brief to deposit account no. 08-2025.

Respectfully submitted,

Dated: November 18, 2008 By

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(9) Claim Appendix

1. A secure token for use with an encrypted file and an insecure decryption device, the secure token comprising a processor for protecting a first cryptographic key against unauthorized access, and creating a second cryptographic key from the first key and a message unique to the insecure device, the second key usable for file decryption by the insecure device.

2. The secure token of claim 1 wherein the secure token includes a smart card, the smart card including the processor.

3. The secure token of claim 1, wherein the processor uses a hash function to create the second key from the message and the first key.

4. The secure token of claim 1, wherein the secure token performs an electronic transaction to obtain the first key.

5. The secure token of claim 4, wherein the secure token conducts a transaction with a server to purchase a desired file; and wherein the secure token receives the first key from the server.

6. The secure token of claim 4, wherein the secure token conducts a transaction with a peer to purchase a file; and wherein the secure token receives the first key from the peer.

7. The secure token of claim 4, wherein the secure token conducts a transaction with a peer to sell a file; and wherein the secure token sends the first key to the peer.

8. The secure token of claim 7, wherein the secure token creates a third key that is unique to the peer, and sends the third key to the insecure device and the peer.

9. The secure token of claim 1, further comprising means for receiving the first key and encrypted data, wherein the insecure device uses the second key to decrypt the encrypted data.

10. The secure token of claim 1, wherein processing power of the secure token is significantly less than processing power of the insecure device.

11. An article for a secure device, the secure device including a processor, the secure device used in combination with an insecure device, the article comprising memory encoded with data for instructing the processor to protect a first cryptographic key against unauthorized access, use a hash function to create a second cryptographic key from the first key and a message unique to the insecure device, and send the second key to the insecure device.

12. The article of claim 11, wherein data further instructs the processor to perform an electronic transaction to obtain the first key.

13. The article of claim 12, wherein the secure device conducts a transaction with a server to purchase a desired file; and wherein the secure device receives the first key from the server.

14. The article of claim 13, wherein the secure device conducts a transaction with a peer to purchase a file; and wherein the secure device receives the first key from the peer.

15. The article of claim 13, wherein the secure device conducts a transaction with a peer to sell a file; and wherein the secure device sends the first key to the peer.

16. The article of claim 15, wherein the data further instructs the processor to create a third key that is unique to the peer, sends the third key to the insecure device and the peer.

17. A data rights management server for use with a media transaction system, the server comprising a processing unit programmed to cause the server to establish a secure channel with a smart card, access a unique identifier corresponding to an insecure device, send a first cryptographic key to the smart card via the secure channel, receive a unique identifier from the insecure device, create a second key from the first key and the identifier; encrypt a media file with the second key, and send the encrypted media file to the insecure device, the first key corresponding to the media file.

18. The server of claim 17, wherein the smart card and the server perform an electronic transaction for the first key.

19. A method of using an insecure decryption device for file distribution, the method comprising:

accessing a message unique to the insecure device;

accessing a first cryptographic key;

creating a second cryptographic key from the message and the first key; and

allowing the insecure device to access the second key but not the first key; whereby the insecure device can use the second key for decryption.

20. The method of claim 19, wherein a hash function is used to create the second key from the message and the first key.

21. The method of claim 19, wherein accessing the first key includes performing an electronic transaction to obtain the first key.

22. The method of claim 21, wherein the electronic transaction is conducted with a server to purchase a desired file; and accessing the first key includes receiving the first key from the server.

23. The method of claim 21, wherein the electronic transaction is conducted with a peer to purchase a file; and wherein accessing the first key includes receiving the first key from the peer.

24. The method of claim 21, wherein the electronic transaction is conducted with a peer to sell a file; the method further comprising sending the first key to the peer.

25. The method of claim 24, further comprising creating a third key that is unique to the peer, and sending the third key to the insecure device and the peer.

26. An insecure decryption device for use with a secure device and a first cryptographic key, the device comprising:

means for sending a message to the secure device, the message unique to the insecure device;

means for receiving a second cryptographic key from the secure device, the second cryptographic key derived from the message and the first cryptographic key; and

means for performing decryption with the second cryptographic key.

27. The device of claim 26, further comprising means for playing media decrypted with the second cryptographic key.

28. A trusted system for file distribution, the system comprising:

an insecure device; and

a trusted secure device for storing a first cryptographic key, accessing a message from the insecure device wherein the message is unique to the insecure device, creating a second cryptographic key from the message and the first key, and allowing the insecure device to access the second key, the first key granting file access rights;

the insecure device not allowed to access the first key, the insecure device using the second key for decryption.

29. (Canceled).

30. The system of claim 28, wherein the secure device is a secure token.

31. The system of claim 30, wherein the secure token includes a smart card.

32. The system of claim 31, wherein the insecure device includes a media player.

33. The system of claim 28, wherein the secure device is configured to perform an electronic transaction to obtain the first key.

34. The system of claim 28, wherein processing power of the secure device is significantly less than processing power of the insecure device.

35. The system of claim 28, further comprising a peer-to-peer application for identifying peers having desired files.

36. A trusted media transaction system comprising

an insecure media player; and

a trusted secure token for performing an electronic transaction to obtain a first cryptographic key, accessing a message from the insecure device wherein the message is unique to the insecure device, creating a second cryptographic key from the message and the first key, and allowing the insecure device to access the second key, the first key granting media file access rights;

the insecure device configured to use the second key for media file decryption.

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(10) Evidence Appendix

None.

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(11) Related Proceedings Appendix

None.